NEWSLETTER

ISSUE 1 | November 2023

InSGeP

NEWS | VIEWS | ANNOUNCEMENTS

InSGeP

INVESTIGATIONS OF SLAGS FROM NEXT GENERATION STEEL MAKING PROCESSES

SNEAKPEEK

Project information

Setting the scene | Learn more about our new InSGeP initiative

Consortium

Meet the team | Introduction of the project consortium

Project launch

The journey has begun | The official kick-off meeting in Duisburg

The InSGeP project, titled “Investigations of Slags from Next Generation Steel Making Processes”, is a European research initiative co-funded by the EU Research Fund for Coal and Steel. In the scope of the project, five steel plants, six research and technology organizations, and two plant manufacturers from Austria, Belgium, France, Germany, Italy, and Spain evaluate potential implications of future steel production on the ensuing slag.

TRANSFORMING RESIDUES INTO RESOURCES

Because slag is a necessary by-product of the steel making process, its sustainable recycling or usage rather than landfilling is a significant contribution to a circular economy.

When properly treated, slag substitutes natural resources. It can be used in a variety of industries, thereby mitigating the environmental impacts associated with extracting the natural resources that would otherwise be required.

The project receives funding from the European Union's Research Fund for Coal and Steel research programme under grant agreement number 101112665.

ABOUT InSGeP

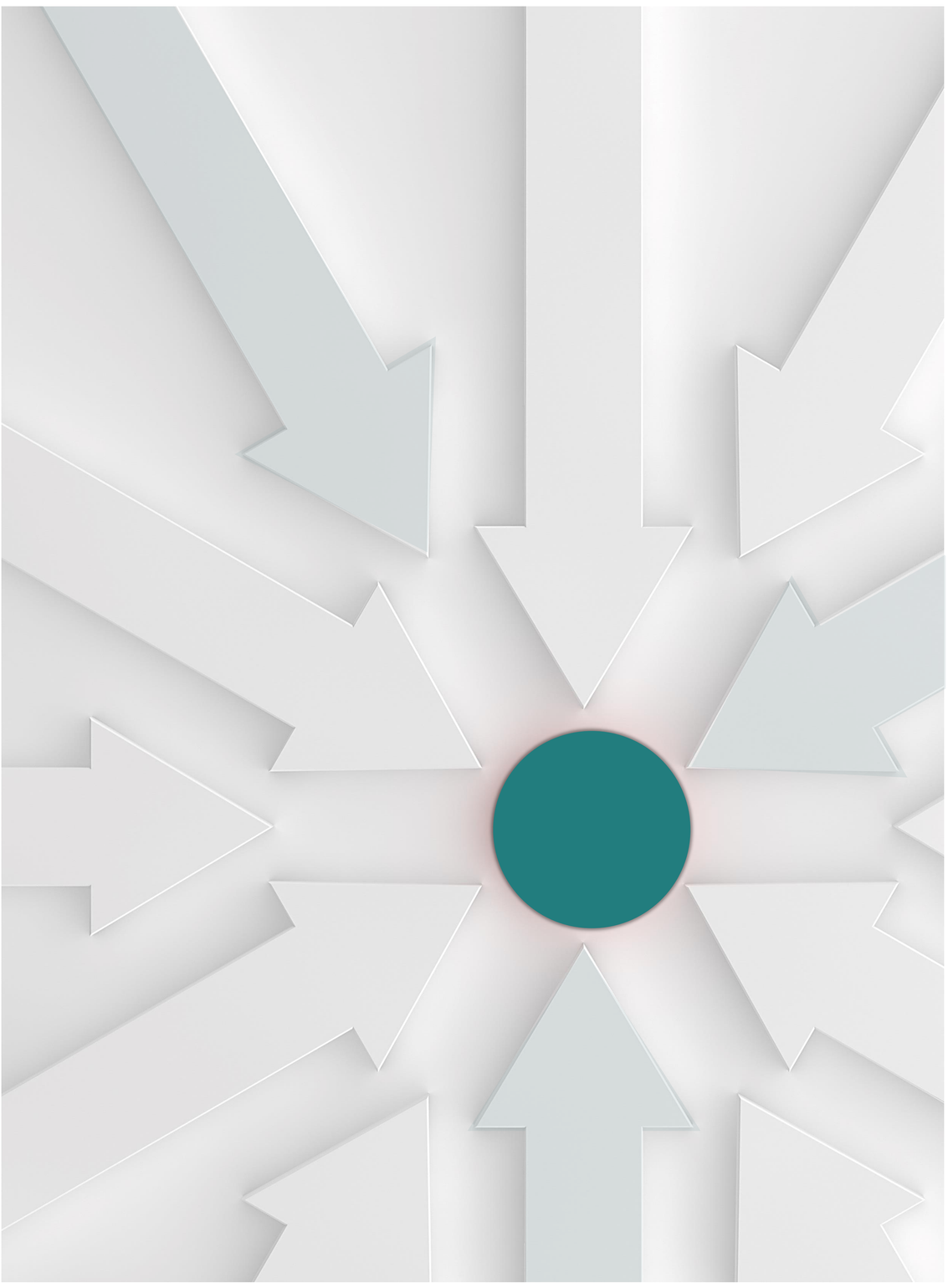
MOTIVATION

Complying with the EU Green Deal, the RFCS objectives and Horizon Europe’s Missions to move towards climate neutrality by 2050 with a zero-pollution ambition, we must ensure that, while introducing breakthrough technologies to produce green steel, the circular concept is maintained. As Europe's next generation steel manufacturing is in its early phases, fundamental research is required to comprehend the changes that will occur and prepare for solutions that will be needed.

This necessitates an understanding of the possibility of valorizing future slags in the current value chain and defining innovative applications to ensure a smooth transition process with minimal disruption to the steel industry and other sectors that rely on slag as a raw material in their processes.

The InSGeP project aims to understand the potential impact of next generation steel production on the resulting slag. InSGeP will not only define what types of future slags can be expected, but also investigate possible valorization paths.

The project was launched on 1st July 2023 and has a duration of 48 months.



OBJECTIVES

TARGETS & HOW TO MEET THEM

The project addresses the production of steel with direct reduced iron, hot briquetted iron, and its combination with scrap in an electric arc furnace or smelter or hydrogen plasma smelting reduction, as well as the quality of the resulting slag.

The slags are evaluated based on chemical, mineral, environmental and physical properties and treated with different cooling and granulation methods to produce physical characteristics needed for different applications and environmentally compatible products. The slags are examined in applications such as road construction, cement/concrete, liming material, and 3D printing.

The project receives funding from the European Union's Research Fund for Coal and Steel research programme under grant agreement number 101112665.

The project is divided into six work packages, which focus on the following subjects:

- Project Management
- Data gathering about slag produced from next generation steel making
- Collection of samples and laboratory analysis
- Slag treatment solutions
- Definition of possible applications
- Dissemination, exploitation and communication

CONSORTIUM

MEET OUR TEAM

The project is coordinate by FEhS - Institut für Baustoff-Forschung e.V., a collaborative non-profit research organization supported by the German, Netherlands, Swiss, and Austrian steel industries.

The consortium is comprised of 13 partners and three subcontractors to cover a wide area of expertise dealing with slag throughout Europe. Included among these 13 partners are five steelworks (ORI Martin, voestalpine Stahl GmbH, The Saarstahl Group, ArcelorMittal Maizieres Research S. A. and Sidenor), six research and technology organizations (FEhS, RINA-CSM, K1-MET GmbH, Scuola Superiore Sant'Anna, Centre for Research in Metallurgy and VDEh-Betriebsforschungsinstitut GmbH) and 2 suppliers (Tenova SpA and Primetals Technologies).

Each project partner contributes a unique perspective and skillset that will be crucial in driving the project's development.

The project receives funding from the European Union's Research Fund for Coal and Steel research programme under grant agreement number 101112665.

PROJECT LAUNCH

KICK-OFF MEETING IN DUISBURG

InGeP was launched with an official kick-off meeting on the 3rd and 4th July 2023. Combining physical presence with virtual connectivity, consortium members, project subcontractors, and the EU project officer gathered in Duisburg to officially launch the project at the Coordinator's office.

Following the discussions, attendees were given a tour of the coordinating institute's facilities, which served as an inspiration for future project advancements.

The kick-off meeting established a solid platform for the project's progress. With a unified vision and a strategic plan in place, the project's participants are ready to propel it toward its ambitious objectives.

START DATE | 01-07-2023
PROJECT DURATION | 48 months
TOPIC | RFCS-02-2022-RPJ
COORDINATED BY | FEhS
CONTACT | info@insgep.eu
WEBSITE | insgep.eu

PUBLICATION DATE | November 2023

To be informed about the most recent news and developments, visit our website, follow us on LinkedIn, and sign up for our newsletter on insgep.eu!

The project receives funding from the European Union's Research Fund for Coal and Steel research programme under grant agreement number 101112665.